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INCOMPLETE SOVIET MECHANIZATION HOLDS DOWN PRODUCTION; UTILIZE MOVABLE MACHINE TOOLS

MANY AUXILIARY OPERATIONS STILL DONE BY HAND -- Moscow, Izvestiya, 15 Feb 51

Industrial mechanization of labor-consuming processes is proceeding smoothly and according to plan, with especially notable advances being made in the machine-building field.

The leading plants have completely mechanized their foundry processes, from charging the furnaces to cleaning the finished castings. In foundry No 3 of the Automobile Plant imeni Stalin, for example, mechanization has raised the economic indexes of the shop and paved the way for the attainment of a Stakhanovite rating. The shaped-steel casting shop of the Lyubinsk Plant imeni Kaganovich raised its labor productivity two or three times in molding and shakeout operations, cut down rejects, increased the output of sound castings, and reduced their cost, all through complete mechanization measures. The Moscow Presnenskiy Textile-Machine Building Plant has completely mechanized its small-castings section, despite the fact that its foundry's range of products exceeds 1,000.

In estimating the effect of foundry mechanization, it may be said that the output of one worker in a well-organized and completely mechanized foundry approaches 50 tons per year, while in shops not properly mechanized, the worker's yearly output amounts to 8-14 tons.

Much has also been done in mechanizing assembly shops. Trucks telphers, and other items of hoist and transport equipment are being widely utilized.

Despite the general progress of mechanization, however, its application in many branches of industry is lagging far behind, and a great deal of labor-consuming work in the machine-building field is still done by hand. The reason for this is that mechanization is either incomplete or poorly planned. Mechanization of production processes, especially in old plants, is carried out as individual occasions arise, and not according to an integrated plan taking in all related aspects of production. Thus, in many enterprises, the mechanization in preparations shops lags far behind that of the machine and assembly shops.

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The mechanization of gathering, processing, and shipping out steel and iron chips is of great importance. These processes are performed by hand, however, in many plants.

Mechanization of processes in forge shops, especially the feeding of parts to the furnaces and the manipulation of parts during forging, are not mechanized to a sufficient degree. In the welding shops there is inadequate application of machines for laying out, cutting, and trimming semi-finished parts.

While many enterprises apply advanced technological processes in basic production, they fail to utilize these processes fully in auxiliary operations, including transportation and technical inspection. With comparatively few workers occupied in basic technological operations, and a great number of unskilled workers performing auxiliary operations by hand, the effectiveness of mechanizing basic production processes is greatly reduced.

Progress in the mechanization of technological processes is not entirely satisfactory. Much work up to this time has been wasted in scraping, polishing, filing, and other work now carried out by hand in the machine and assembly shops.

It is apparent that neither the directors of enterprises nor the ministry are devoting sufficient attention to the question of complete and integrated mechanization of labor-consuming processes. Mechanization should reach all sections of the plant, and be applied to all phases of production.

A scientific-technical conference on mechanization was recently held in Moscow, with over 2,000 participating. A broad plan for integrated mechanization was developed, and it was urged that the manufacture of mechanization equipment by specialized plants be supplemented by the output of plants turning out such equipment for their own use. It was also suggested that special groups should be formed in all plants to work on problems of mechanization. -- V. Lyul'chenko, chairman, Moscow All-Union Scientific and Technical Engineering Society for Machine Building

NEW METHOD SPEEDS MACHINING OF HEAVY PARTS -- Yerevan, Kommunist, 22 Feb 51

The /Novo-/ Kramatorsk Plant imeni Stalin has begun to use movable machine tools for working on heavy parts. In the past it often took more time to set these parts up for machining than it did to carry out the actual machining operations. Under the present system, the heavy part can be set up in one place, while the machine tool is working on a part in another place. The machine tool is then moved over to the part which has been set up, and can immediately begin working on it. Another advantage of the new method is that two or three machine tools can be brought to work on a single part at once.

During the past week, drilling machine No 165 has been moved about the first machine shop three times, working first on a part for a large mixer, then drilling parts for a rolling mill stand, and finally drilling parts for a 15-cubic-meter-capacity excavator.

PUT MACHINES ON HIGH-SPEED OPERATION -- Moscow, Vechernyaya Moskva, 26 Feb 51

Machinists at the Plant imeni Vladimir Il'ich once hesitated to apply high-speed methods to the vertical turning and boring machines which work on the heavy castings for electric-motor stands. It was feared that the part might be thrown from its holder by centrifugal force.

Now, however, the high-speed method is applied to all the machines working on these parts, and with signal success. The machines are presently running at 55 revolutions per minute, with each machine turning out ten stands per shift.

IMPROVE PLANT LAYOUT -- Yerevan, Kommunist, 9 Feb 51

The Yerevan Electrical-Machine Building Plant recently won first place in the All-Union Socialist Competition, in addition to the Transferable Red Banner of the All-Union Central Council of Trade Unions and of the Ministry of the Electrical Industry.

During the first years of the postwar Five-Year Plan, the plant set up new shops, installed new equipment, and began to produce 100-kilowatt generators and transformers of varying capacities for rural electrification.

Recent efforts have been directed toward improvement of the physical layout of the plant. Intraplant roads have been paved with asphalt in the past 2 years, making them suitable for the easy travel of electric cranes, truck cranes, dump trucks, and electric hoists. Shops have been fitted out with all the accessories needed to render working conditions ideal under high-production methods.

The 1950 plan was fulfilled 29 November. Gross production exceeded the 1949 figure 48.6 percent, while the year's production of generators of all types was 74.4 percent greater than the 1949 figure, and for transformers, 37.1 percent greater.

During 1950, the plant put seven new items into production, four types of generators, one transformer, and two types of control panels for rural power stations. During the same year, the plant fulfilled the plan for designing and producing experimental movable substations for powering electric plowing units. -- V. Minasyan, deputy director, Yerevan Electrical-Machine Building Plant

LOAD GOVERNOR PREVENTS ACCIDENTS -- Moscow, Mekhanizatsiya Trudoyemkikh i Tyazhelykh Rabot, Dec 50

The Sverdlovsk Uralmash Plant has achieved satisfactory results from an experimental load governor which it built for a 7.5-ton overhead traveling crane. Designed to prevent cable breakage and other accidents due to overloading, the desired static-load limit is set on an indicator, and if the actual load exceeds this, the governor automatically shuts off the current to the electric hoist motor.

Several of these devices were tested in 1950. Four of them are now in use, and a series for cranes of 5-30 tons' capacity will be produced.

The governor operates through the force exerted by a cable passing over a pulley just beyond its fixed end, and acting on a spring. The tension on the spring is set to correspond to the desired weight limit.

FAIL TO SUPPLY SPARE PARTS -- Moscow, Izvestiya, 11 Feb 51

An engineer writes that the Russkiy Dizel and Dvigatel' Revolyutsii Plants are failing to provide the necessary spare parts with all their diesel engines. As a result, during the first months that these engines are used in electric power stations, the engineers have to carry on lengthy correspondence in an attempt to get the spare parts, using worn-out parts in the meantime, or unsuitable substitutes.

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Two examples may be cited. The diesel engine which the Dvigatel' Revolyutsii Plant sent the Baydzhansay Mine Administration, frequently ran unevenly because several of the parts had gotten out of order, and the required replacements had not been shipped with the engine. A similar instance occurred at the Zolotyshinsk Mine Administration, which had been supplied with a diesel by the Russkiy Dizel Plant.

It is up to the Ministry of Heavy-Machine Building to look into the question of the complement of spare parts shipped out with the new diesels. To speed up the orders of parts, each part should be given a designation number.

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